

# LBX-633S

Diode based laser source

## Optical characteristics \*

Emission wavelength	633 nm ( $\pm 5$ nm tolerance)
Spectral linewidth, FWHM	$\leq 100$ MHz
Wavelength stability over 8 hours, temperature within $\pm 3^\circ\text{C}$	$\leq 10$ pm
Coherence length	$\geq 1$ m

## Optical power

Part number	Free space output	Fiber-coupled output	
		Single mode	Multi mode fiber
LBX-633S-40-CIR-(OE/PPF)	40 mW	28 mW	32 mW

**Power stability**  $\pm 1\%$   
over 8 hour, temperature within  $\pm 3^\circ\text{C}$

**Control modes** Automatic Current Control (ACC)

**Optical noise**  $\leq 0.2\%$  rms  
10 Hz-20 MHz bandwidth

## External modulation

**Analog Modulation** L1C-MPA option | L1C-AOM option

**Rise / fall time**  $\leq 1$  s |  $\leq 300$  ns

**-3dB modulation bandwidth** - |  $\geq 3$  MHz

**Digital Modulation**

**Rise / fall time**  $\leq 30$  ms |  $\leq 300$  ns

**-3dB modulation bandwidth** - |  $\geq 3$  MHz

## Transverse singlemode free-space beam

**Beam diameter (typ)** at  $1/e^2$ ,  
5 cm from the beam aperture 0.4 mm

**Beam divergence** at  $1/e^2$   
full beam, in far field 7.7 mrad

**Beam quality factor**  $M^2 \leq 1.9$

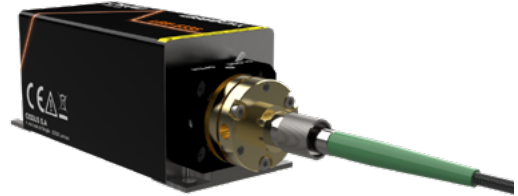
**Beam circularity**, in far field  $\geq 65\%$

**Polarization state** Linear, vertical at  $\pm 5^\circ$

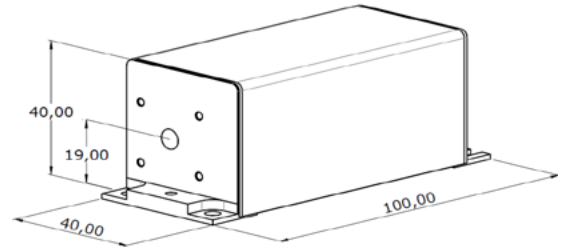
**Polarization**  $> 50 : 1$

## General specifications

	Plug and Play version	OEM version
Compliance	CE FDA 21 CFR 1040.10/1040.1	FDA 21 CFR 1040.10 / 1040.11
Operating temperature	10 to 38°C ambient air with optional heat sink	20 to 35°C baseplate
Power consumption	10 W max.	
Storage temperature	0 to 60°C	
Humidity	Up to 90%RH, non-condensing	
Supply voltage	100 to 240 VAC external power supply	5 to 12 VDC
Warm-up time	$\leq 2$ minutes	
Interfaces	USB ControlBoxx controller	USB, RS-232, electronic interface



## Mechanical drawings



## Plug and Play version provide with:

- RemoteBoxx controller
- Manual shutter
- DC power supply

## Available options

- ACX-HTSK-1 Heat sink for operation in ambient air up to 38°C
- OPT-SHTE-LCX Electro-mechanical shutter
- L1C-MPA for power adjustment
- L1C-AOM for high speed modulation

## Fiber coupling options \*\*

	ACX-FCSMUV or ACX-FCPM	ACX-FCMM-R50
Power stability over 8 hours and within $\pm 3\%$	$\pm 2.0\%$	$\pm 2.0\%$
Fiber optical characteristics	3.5µm core diameter 0.11 N.A	50µm core diameter 0.22 N.A
Polarization extinction ratio (ACX-FCPM only)	$> 50 : 1$	n/a
Fiber output connector	FC/APC	FC/APC
Fiber length	2 m	2 m

Warranty : 12 months from shipment date

\*Specifications at nominal power

\*\* Variant are available on demand



## CONTACT US

Oxxius S.A  
4 rue Louis de Broglie  
F-22300 Lannion, France

Phone : +33 296 48 70 28  
sales@oxxius.com  
www.oxxius.com